

# Work Order ID 68997

Wednesday, April 27, 2011 8:16:03 AM



Page 1

Item ID:	D4311-5	Accept		Setup	Start	
Revision ID:	PRELIM				Stop	
Item Name:	Placard					
Start Date:	4/27/2011	Start Qty:	2.00		Cust Item ID:	
Required Date:	4/27/2011	Req'd Qty:	2.00		Customer:	
Reference:						

Approvals:	Process Plan:	<u>CL</u>	Date:	<u>11/04/27</u>	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D4311	<u>Rev A</u>								

100		0.00							
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Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>13952</u>								
	Manufacture as per Dwg D4311								
	Possible supplier: Studio Letrage								
	Material release note is required.								

110	Receive & Inspect for Damage & Mat'l Certs	0.00							
-----	--	------	--	--	--	--	--	--	--

Packaging	Memo	0.00							
Packaging									

120	QC6- Inspect dimensions to drawing	0.00							
-----	------------------------------------	------	--	--	--	--	--	--	--

QC	Memo	0.00							
Quality Control									

0.00 - inspect to Rev A  
(un approved)

0.00 Dwg only

8/10/29 (2)



**PRELIMINARY ISSUE**

CL 11/04/27 (2)

Rev A 11/4/29 (2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 68997**

Wednesday, April 27, 2011 8:16:03 AM



Page 2

Item ID: D4311-5

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Placard

Start Date: 4/27/2011 Start Qty: 2.00



Cust Item ID:

Required Date: 4/27/2011 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

ship to Eagle  
attn: Harvey

CL 11/04/29 (2)

Packaging

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/5/16

CL 11/04/29

POSITIVE RECALL

EFFECTIVE 11/04/16 AUTH

RELEASED DATE 10/9/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, April 27, 2011 8:16:00 AM

Page 1

Work Order ID: 68997



Parent Item: D4311-5



Parent Item Name: Placard



Start Date: 4/27/2011

Required Date: 4/27/2011

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 11.04.27 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4311-5P  Placard		Purchased	No			110	Each	0.0000	1 	2			

*Calypso (2)*

**Dart Aerospace Ltd**

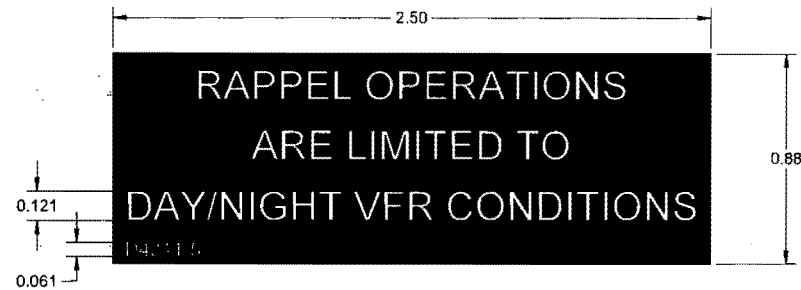
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



D4311-5 PLACARD

CL 11104127  
W/D. 68997

- NOTES:
- 1) MATERIAL: MANUFACTURED FROM 3M 7 MIL MASKING FILM #8522CP OR AVERY IPM #2031
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.00 lbs
  - 8) WHITE LETTERS ON BLACK ADHESIVE BACK

DESIGN	<i>JS</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>JS</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>JS</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>JS</i>	D4311	SHEET 4 OF 4
APPROVED	<i>JS</i>	TITLE	SCALE
DE APPR.		RAPPEL ATTACHMENT	NTS
DATE	11.03.31	<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	







Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO13952**

Purchase Order Date 4/27/2011

PO Print Date 4/27/2011

Page Number 1 of 1

**Order From :**

VC-STU001

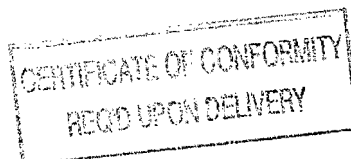
STUDIO DE LETTRAGE 2001  
210 MAIN WEST  
HAWKESBURY, ON K6A 2H6  
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	613 632 5449	Requisition Nbr	
Vendor Fax	613 632 9491	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

PAID  
(L11/10/12)

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D4349-15P	PLACARD	4/27/2011 Yes	2.00 Each	Yours ppd	\$30.0000 \$ 31.25	\$60.00
2	D4311-5P PRELIM	Placard	4/27/2011 Yes	2.00 Each	Yours ppd	\$30.0000 \$ 31.25	\$60.00
Special Inst: AS PER DWG D4349 REV. PA6 B68996							
Special Inst: AS PER DWG D4311 REV. PA6 B68997							
PO Total:							\$120.00



Change Nbr: 1

Change Date: 4/27/2011

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable



# Studio de Lettrage

210 Main Street W  
Hawkesbury, Ontario K6A 2H6

## INVOICE

Invoice No.: 15618  
Date: 04/28/2011  
Ship Date:  
Page: 1  
Re: Order No. 10717

### Sold to:

Dart Aerospace Ltd  
1270 Aberdeen  
Hawkesbury, Ontario  
K6A 1K7

### Ship to:

Dart Aerospace Ltd  
Hawkesbury, Ontario

Business No.: 869034678RP0001

Item No.	Unit	Quantity	Description	Tax	Unit Price	Amount
		2	D4349-15P setup	H	25.00	50.00
		2	D4311-5P setup	H	25.00	50.00
		1	printing	H	25.00	25.00
			H - HST 13% HST			16.25
			PST Exempt: #6122-5207			
			8/11/04/09			
Studio de Lettrage HST: #869034678RP001						
Shipped By: Tracking Number:						
Comment: FO 13952						
Sold By:						
Total Amount						141.25





# Scotchcal™

## Opaque Imaging Media 8522

### Description

This media is specially formulated to dry quickly after printing. Production of outdoor weatherable and long-term indoor durable graphics is now easier than ever. Its changeable adhesive allows easy removal for up to one year.

### Advantages

- Optimized for use with selected Epson Stylus Pro printers and Epson Archival inks.
- Optimized for use with selected HP DesignJet Printers and HP DesignJet Ink System UV or HP83UV Color Ink System
- For making opaque, laminated graphics that are outdoor weatherable and long-term indoor durable
- Media:
  - For opaque (reflective) graphics
  - Changeable, easy to remove from warranted substrates up to 1 year later
  - Dries quickly after printing so the overlamine can be applied almost immediately
  - Low slippage paper liner for superior tiling
- Overlaminates:
  - Provide additional UV (ultraviolet) and physical protection for making weatherable finished graphics
  - Available in luster and matte gloss
  - Adhesive allows for heat-assisted or cold-temperature lamination

### Applications and Uses

3M™ Scotchcal™ Changeable Opaque Imaging Media 8522 is intended only for ink jet printing and for use with the listed Compatible Products and Equipment and the following applications. Any other application is NOT warranted by 3M or covered by the worldwide 3M™ MCS™ Warranty unless 3M gives its prior written approval for the application.

- First surface images (the image is on top of the film) for opaque posters and signs, including:
  - Graphics for vans, personal vehicles, trucks and buses
  - Novelty posters
  - Retail and point-of-purchase displays
  - Information graphics such as maps and directories
  - Entertainment promotions in museums, zoos, parks, theatres, sports venues
  - Education and presentation graphics

- Legal and courtroom exhibits

- For flat or simple curved surfaces, with or without rivets, used in vertical ( $\pm 10^\circ$ ) applications

### Limitations of End Uses

The following uses and applications are specifically NOT warranted.

- Fleet applications in areas that use salt for winter road maintenance
- Application to non-warranted substrates, including wall-board
- Applications subjected to gasoline vapors or spills
- Application to corrugated or highly irregular surfaces or sharply raised areas
- Graphics applied to stainless steel, including stainless steel vehicles
- On flat surfaces with rivets, tenting of 4 to 10 mm around rivets may be expected; rivets may be cut around to eliminate tenting.

Note: Standard ink jet technology is water based. Water-based chemistry is susceptible to the extremes of heat and humidity. This is a factor in most product constructions on the market. Read the Fabrication, Shelf Life and Storage sections in this bulletin. Staying in the middle of these ranges always provides optimum performance.

## Compatible Products and Equipment

### Thermal Ink Jet Printing Systems

- Epson Stylus Pro 9500, Stylus Pro 10000 printer
  - Epson Archival Inks
- Epson Stylus Pro 10600 printer
  - Epson Archival Inks
- HP DesignJet Printers 2000 and 3000 series
  - HP DesignJet Ink System UV (pigment-based ink)
- HP DesignJet Printers 5000 series
  - HP83UV Color Ink System

### Overlaminates (required)

- 3M™ Luster Overlamine 8519 (semi-gloss)
- 3M™ Matte Overlamine 8520



Note: For the full product names of the 3M products listed on this page, please see page 1.

## Warranted Substrates

Media 8522 is warranted for use on the following rigid substrates.

Some substrates may "out-gas", resulting in tiny bubbles throughout the surface of the graphic. For maximum performance, be sure the substrate you select is properly cleaned and prepared as recommended by the manufacturer. See Instruction Bulletin 5.1 for additional information.

- Alodine (anodized aluminum)
- Automotive panels (automotive painted steel)
- Fruehauf (painted aluminum)
- FRP (fiberglass reinforced plywood)
- Glass
- Imron® (polyurethane-painted metal panel)
- Acrylic
- Sintra™ board

## Test and Approve Non-warranted Substrates Before Use

Media 8522 is not warranted for any substrate other than those listed above. If you want to use it for other substrates, 3M recommends that you test and approve the media for both adhesion and removal characteristics.

## Characteristics

Characteristic	Description
Media	7 mil, white, opaque graphic film
Liner	Low-slippage, lay flat paper
Adhesive	Changeable, pressure sensitive
Thickness (media and adhesive)	7.5 to 8 mil (nominal)
Application substrates	See Warranted Substrates, above
Application surfaces	Flat or simple curved surfaces, with or without rivets, used in vertical ( $\pm 10^\circ$ ) applications (no corrugations)
Application temperature range	28° to 110°F (-2° to 43°C) (air and surface)
Roll sizes	36" x 45 feet (914 mm x 13.5 m) 54" x 45 feet (1372 mm x 13.5 m)

## How to Become a 3M Ink Jet Registered Fabricator

Only 3M Thermal Ink Jet Registered Fabricators are eligible to offer 3M MCS warranted graphics. In order to become certified, a fabricator must complete the requirements as specified in the 3M Ink Jet Graphics Registered Fabricator Reference Manual located on the 3M website at [www.scotchprint.com](http://www.scotchprint.com)

## Effective Performance Life

To obtain the warranty given below, the graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3. Also see the section, Removability.

## Warranted Durability

Media 8522 with Overlamine 8519 or 8520	Epson Printers		HP Printers	
	Outdoor	Indoor	Outdoor	Indoor
Applied to Warranted Substrates	2 years	5 years	3 years	5 years

## Removability

Imaging media 8522 is removable from warranted substrates for 1 year without the aid of chemical strippers or accessories. Refer to Instruction Bulletin 4.23 for additional information.

## Fabrication

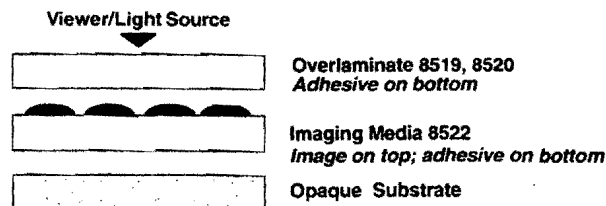
Graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3.

See Instruction Bulletin 4.23 for detailed fabrication, printing and mounting information.

## Graphic Construction Options

### Opaque (Reflective) Graphics

Opaque graphics made with imaging media 8522 require an overlamine and an opaque substrate.








Note: For the full product names of the 3M products listed on this page, please see page 1.

## Shelf Life and Storage

- 3M™ Scotchcal™ Changeable Opaque Imaging Media 8522 has a shelf life of one year.
- Storage conditions (new and partially used rolls). For optimum performance, use the middle of these ranges:
  - Original packaging, including plastic wrap
  - Relative humidity of 20% to 80%
  - Temperature of 33° to 104°F (0° to 40°C)
  - Away from direct sunlight
- Do not stack unprotected rolls or lay sharp or heavy objects on them.

## Health and Safety

 **Caution**

When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.

To obtain MSDS sheets for 3M products:

- By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.
- Electronically, visit us at <http://www.3m.com/msds>.
- By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

## Warranty and Limited Remedies

### 3M™ MCS™ Warranty for Graphics Produced on HP DesignJet Printers and Epson Stylus Pro Printers

*The following is made in lieu of all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose: We warrant graphics produced by a 3M Ink Jet Registered Fabricator made with imaging media 8522, printed on an approved HP thermal ink jet printer according to HP's recommendations or Epson Stylus Pro printer according to Epson's recommendations, overlaminated with 8519 or 8520, and applied to a Warranted Substrate according to 3M's recommendations. These*

### 3M

#### Commercial Graphics Division

3M Center, Building 220-6W-06  
PO Box 33220  
St. Paul, MN 55133-3220 USA  
General Info: 1-800-374-6772  
Technical Info: 1-800-328-3908  
Fax: 1-651-736-4233

Fax on-Demand: 1-800-364-0768 US/Canada or 1-651-737-6506 International  
Fax on-Demand document: 4506  
[www.scotchprint.com](http://www.scotchprint.com)

#### 3M Canada

P.O. Box 5757  
London, Ontario  
Canada N6A 4T1  
1-800-265-1840  
Fax: 519-452-6245

#### 3M México, S.A. de C.V.

Av. Santa Fe No. 55  
Col. Santa Fe, Del. Álvaro Obregón  
México, D.F. 01210  
52-55-52-70-04-00  
Fax: 52-55-52-70-22-77

#### 3M Puerto Rico, Inc.

Puerto Rico Industrial Park  
P.O. Box 100  
Carolina, PR 00986-0100  
787-620-3000  
Fax: 787-750-3035

graphics are covered against failure caused by ultraviolet light, temperature extremes, pollution, and other elements.

If a graphic fails to perform in accordance with 3M product specifications within this time frame, 3M will replace the materials at no charge. **These remedies are exclusive. In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor charges.**

## 3M Related Literature

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our Web site at [www.scotchprint.com](http://www.scotchprint.com), or order them via our Fax-on-Demand (FOD) system. Call one of these phone numbers to order the desired bulletins, and specify the FOD document number provided in the chart.

United States or Canada: 1-800-364-0768

International: 1-651-732-6506

Subject	Bulletin No.	FOD No.
<b>Product Bulletins</b>		
3M™ Scotchcal™ Overlamine 8519 and 8520	8519/8520	4524
<b>Instruction Bulletins</b>		
Making thermal ink jet graphics	4.23	6523
Application, substrate selection, preparation and substrate-specific application techniques	5.1	7001
<b>Warranties</b>		
Worldwide 3M™ MCS™ Warranty Packet (includes all Commercial Graphics MCS Warranties)		9503
Worldwide 3M™ MCS™ Warranty Overview-Folder		9504

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Epson and Stylus Pro are trademarks of Epson.

HP and DesignJet are trademarks of Hewlett-Packard.

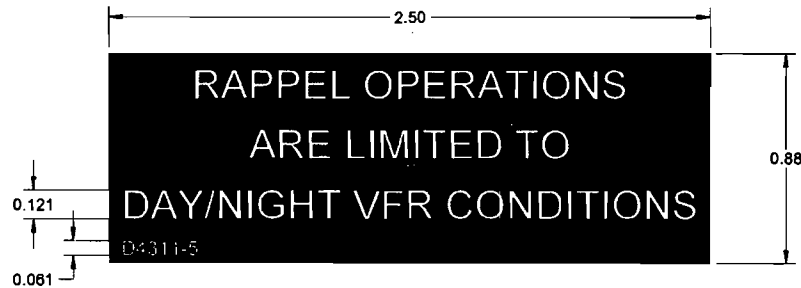
Sintra is a trademark of Swiss Aluminum Ltd.

Intron is a registered trademark of DuPont in the United States

### Bulletin Change Summary

The Epson Stylus Pro Printers 9500, 10000 10600, and Epson Archival Inks have been added to this bulletin. Additional changes resulting from this addition are marked with black bars in the margin.





**D4311-5 PLACARD**

68997

**RELEASED**  
2011-05-10

- NOTES:**
- 1) MATERIAL: MANUFACTURED FROM 3M 7 MIL MASKING FILM #8522CP OR AVERY IPM #2031
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.00 lbs
  - 8) WHITE LETTERS ON BLACK ADHESIVE BACK

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		<b>D4311</b>	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		<b>RAPPEL ATTACHMENT</b>	NTS
DATE	<b>11.03.31</b>	<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

